

## CONSULTING IN THE PUBLIC INTEREST

53 Clinton Street, Lambertville, NJ 08530

Phone: (609) 397-2370

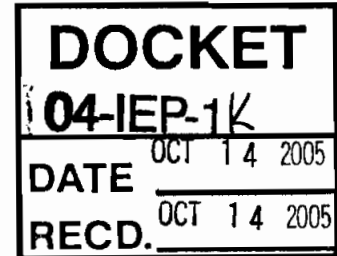
Fax: (609) 397-1209

Web Site: [www.cipi.com](http://www.cipi.com)

e-mail: [jbeyea@cipi.com](mailto:jbeyea@cipi.com)

October 14, 2005

Commissioner John Geesman,  
Commissioner Jim Boyd  
California Energy Commission



**RE:** 04 IEP 1K Committee Draft Document Hearings

As a scientist and science adviser, who has been involved in the avian-wind debate over the years, including the debate on Altamont Pass, I am submitting comments that I prepared for, but was not able to give at, the oral presentation on October 6<sup>th</sup>. My comments, which are attached, are directed at what I believe to be a short-sighted response to the avian-wind issue in the draft Integrated Energy Policy Report on page 102, paragraph 2.<sup>1</sup>

My hope is that you will move beyond pinning your hopes on turbine repowering to recommend implementing immediate mitigative measures in an experimental paradigm. The measures that should be implemented now are those based on the strongest of the associations identified in the report, *Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area*, by Shawn Smallwood and Carl Thelander. (I define "strongest" in my comments.)

Sincerely,

Jan Beyea, Ph.D.

---

<sup>1</sup> "The Energy Commission believes that the earlier research *Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area*, represents an important initial effort to craft a methodology to prescribe mitigation measures, but that it should not be misused to form the sole basis for such mitigation measures. Inadequate access to certain turbines, time lapses between surveys, length of survey period, and various extrapolation techniques deprive it of the evidentiary value which the Energy Commission would require as the basis for mitigation measures in a power plant siting case. The scientific value of ongoing Energy Commission research into avian mortality prevention should not be jeopardized by misapplication of what are essentially experimental results."

Oral remarks that were prepared for, but not delivered at, the CEC's October 6<sup>th</sup>, 2005 hearing on the IEPR  
concerning the section on avian mortality.

Submitted in writing for the record, October 14, 2005.

By Jan Beyea, Ph.D.<sup>2</sup>

Consulting in the Public Interest,

Lambertville, NJ, 08530

jbeyea@cipi.com

I have prepared a more technical review of the Smallwood/Thelander report,<sup>3</sup> which can be obtained from me on request. Today, I address some key points relevant to the IEPR.

I first became acquainted with the avian research issue at Altamont many years ago. At the time, I was a staff scientist at the National Audubon Society. I was publicly critical of the industry-sponsored research of the period. I called for a moratorium on wind development until the situation improved. Fortunately, a consortium of interests rose to the challenge. As a result, avian research improved. Evidence increased that most problems with wind were localized to sites with high use by important species. A universal moratorium no longer seemed necessary.

Altamont was one of the very few sites in the world where there appeared to be serious problems. That's been known for a long time. Yet, what do I find when I come back to this issue in recent weeks to review the S/T report? Virtually no progress prior to the action taken recently by Alameda County. We are still dealing with high kills of birds of special concern, such as Golden Eagles and Burrowing Owls. I now find evidence in the S/T report

---

<sup>2</sup> As my vita indicates ([www.cipi.com](http://www.cipi.com)), I am an experienced peer reviewer of scientific reports and articles, especially those with policy implications. I am a division advisor to the National Research Council (NRC) of the National Academy of Sciences, and I regularly peer review NRC reports prepared for Federal agencies. I am also a peer reviewer for a number of scholarly journals. I have served on many study panels of the National Research Council. My data-related, scientific work that relates to the Smallwood/Thelander report and the controversy surrounding it involves both wildlife and human epidemiology.

<sup>3</sup> Beyea, J., "Preliminary review of report, 'Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area,' in the context of criticisms by WEST, Inc. and comments by the California Energy Commission in its draft 2005 Integrated Energy Policy Report," Consulting in the Public Interest, October 4, 2005. Draft.

that, as I suspected would be the case in the early 90s, mitigation proposed by industry has done little to reduce mortality. We can't count on voluntary mitigation based on industry research.

The Smallwood/Thelander report is exactly the kind of independent research that was sorely missing in the past. Yet, I find from the draft IEPR report, that the S/T report is to be dismissed by the CEC from any role in policy making. In fact, as I read the current text, the CEC is basically recommending that nothing be done about the problem in the Altamont Pass, other than to ask the Feds-- to pass national legislation to help a local problem. If that attitude is widely accepted, another 13 years will likely pass with little progress being made.

The Smallwood/Thelander report deserves more than a simple dismissal. I say that as an experienced peer reviewer of scientific reports and articles, especially those with policy implications. I am a division advisor to the National Research Council of the National Academy of Sciences, and I regularly peer review National Research Council reports prepared for Federal agencies. I am also a peer reviewer for a number of scholarly journals. I have served on many study panels of the National Research Council.

My comments on the data controversies surrounding the report are based on years of extensive work with many comparable data sets--- both in wildlife studies and in human epidemiology.

Like all reports, there are strengths and weaknesses in the S&T report. The strong parts should form the basis of policy and CEC recommendations. The weak parts should be ignored for moment, until they are improved. But don't let the weaknesses smear the entire report, which would represent an abuse of the scientific peer review process. The report by Smallwood and Thelander represents a monumental effort in terms of data collection and an excellent start at data analysis. The report strengthens the evidence that the turbines at Altamont Pass are killing uncomfortable numbers of Golden Eagles and Burrowing Owls, which have priority in my view, because of their population vulnerability. The S&T report provides evidence that the number of kills of some species have increased over time, raising new concerns about population viability.

These findings are alone sufficient to justify mitigative action in my view, without going any further into the report. If the predictive modeling in S&T is deemed insufficient to identify the most effective mitigation strategies, then brute force methods are needed to alleviate concerns about population viability. Brute force measures, such as habitat offsets, presumably through the purchase of easements, or shutdowns of turbines for parts of the year.

Yet, there is no mention in the draft IEPR report of offsite easements or of turbine shutdowns during the winter. Can it be that the IEPR authors doubt the total kill rates? Let's look at the IEPR concerns:

First, lack of access to certain turbines. To drop the Seawest turbines from the analysis, as some argue, would be bad science. Inclusion of the seawest turbines partially corrects for what is called, "selection bias." It is obvious to everyone with whom I talk that access to the Seawest site was withheld for so long, because the Golden Eagle kill rates were excessive there. Dropping the Seawest data will lead to an underestimate of yearly fatalities. It will lead to an underestimate of the threat to Golden Eagles.

The IEPR report also indicates concern about survey timing, statistical reliability, and extrapolation. As I indicate in my detailed, written review, these potential problems will not affect the findings in the report with the greatest statistical strength, namely those with low p-values, say 5 in a 1000 or less likelihood of occurring by chance. In all my experience, such strong associations cannot be caused by the kinds of data limitations that are in the data set and referred to in the IEPR report and by WEST, incorporated.

The strong associations can be used today to better allocate mitigation measures and hence save mitigation dollars. A workshop might be the best way to proceed to separate these matters out.

In conclusion, I ask you to recommend use of the strong parts of the S/T report and deferral of mitigative measures related to the weaker associations. What good is research so pure that it can never be completed and never used? And please, don't put all of your avian eggs into the repowering basket.